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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SHANG, ANNAN Q

ART UNIT

PAPER NUMBER

2623

MAIL DATE

DELIVERY MODE

07/06/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

09/927,841

Applicant(s)

CHANG ET AL.

Examiner

Annan Q. Shang

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 7-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/28/07 has been entered.

### ***Claim Objections***

2. Claim 9 objected to because of the following informalities: In claim 9 line 1, the claim depends on a canceled claim 6. It appears "claim 6," should be changed to depend on "...claim 7..." in order to provide a proper antecedent basis to claim 9. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 7-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Williams (5,815,794)** in view of **Martin et al (5,020,129)**.

As to claim 7, Williams teaches a cable system (System 100 in Figure 1) having an RF module (Everything right of Unit 316 of Module 170 excluding Unit 316 in Figure 3) coupled to provide bidirectional communication between drop interface (Unit 316 in Figure 3) and a home interface (Remote point 104 in Figure 3).

Williams further teaches the RF module (Everything right of Unit 316 of Module 170 excluding Unit 316 in Figure 3) having upstream (Return path 320 in Figure 3) and downstream path (Forward path 325 in Figure 3).

Williams further teaches the RF module (Everything right of Unit 316 of Module 170 excluding Unit 316 in Figure 3) comprises at least the downstream path (Forward path 325 in Figure 3) having filters (Diplex filter 360 in Figure 3 referring to remote point 104). The downstream path is connected to a diplex filter (Unit 360 in Figure 3) that contains a high pass and low pass filter (Unit 370 and Unit 365 in Figure 3, respectively).

Williams further teaches Gate 330 (Figure 3 remote point 104) controlled by the headend controller to connect/disconnect service to remote point 104 and further controls the upstream gain and attenuation by dynamically adjusting the gain, power levels, etc., where the gain depends on a maximum upstream level from an interface associated with the RF module (col.7, lines 1-15, col.8, lines 14-18, col.9, line 33-col.10, line 17, col.11, line 39-col.12, line 9 and line 60-col.13, line 1+).

Williams fails to teach a controller for selectively providing unimpeded, partially impeded, and full cut off of cable service in the downstream path.

However, **Martin** teaches a switching mechanism (Fig. 1) that is controlled by a

controller (microcontroller 14 in Fig.1, Col.7, lines 66 - 67, Col.8, lines 1 - 2) for selectively providing unimpeded, partially impeded, and full cut off of cable service in the downstream path and further teaches that access to each logical channels can be provided or denied access based on authorized service codes (Column 4, lines 16 - 37), i.e., if access is provided to all the logical channels, unimpeded service is provided; if access is provided to some logical channels, partially impeded service is provided and if accesses to all logical channels are denied, full cut off cable service is provided.

Hence it would have been obvious to a person of ordinary skill in the art, to modify the gate switch and headend of Williams, using the switching mechanism and microcontroller of Martin, for the purpose of enabling a cable operator to remotely disconnect terminated subscribers, and connect new subscribers.

Claim 8 is met as previously discussed with respect to claim 7. Note that Martin also teaches where relays (switches 20, 22, 24, 26 in Figure 1) in the downstream path are operated by the controller (Microcontroller 'M' 14 in Figure 1 as discussed in claim 1) to obtain unimpeded, partially impeded, and fully cut off cable service and further teaches that M-14 is used to control the state of the switches 20, 22, 24, and 26 to provide access to different channels (channels A, B), by selecting the switches, channels A, B, C, and D can be selectively allowed or denied using either a positive trap or negative trap (Col.7, lines 31 - 47), which meets the claim limitations.

Claim 9 is met as previously discussed with respect to claim 7, note that Martin further teaches where a filter (fixed frequency filter) for impeding frequencies below a first frequency and above a second high frequency is selectively couple is selectively

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coupled into the downstream path by said relays to pass only frequencies between the first and second frequencies and further teaches that the traps (channel A-D trap in Figure 1), are series traps where each series trap is a fixed frequency filter for allowing reception of cable television channels (Column 8, lines 5 - 7), where the filters, passes television channels that are defined by a first and a second frequency, which reads on the claimed limitations .

Claim 10 is met as previously discussed with respect to claims 7 and 8, note that using the negative trap configuration, the switches 20, 22, 24, and 26 in the upstream path provide open circuits to wire 28 to fully cut off cable service in the upstream path.

Claim 11 is met as previously discussed with respect to claim 8. Note that Martin further teaches the series trap employed in the switching mechanism (Figure 1) is a fixed frequency filter for allowing or blocking reception of cable television channels (Col.8, lines 5 - 7). Therefore, the traps are low pass filters that are selectively coupled (as discussed in claim 7) in the upstream path to provide unimpeded cable service in the upstream path. The fixed frequency filter is a low pass filter because it allows or blocks reception of a channel. The channel is composed of a certain frequency band that is either allowed or blocked by the fixed frequency filter. Therefore, the fixed frequency filter allows or blocks certain frequencies that are in between the upper and lower bounds of the certain frequency band designating a channel. Since the fixed frequency filter blocks frequencies above a given frequency and passes frequencies below that given frequency, it is a low pass filter and therefore the present limitation is met.

As to claim 12, Williams further disclose an adjustable amplifier in the upstream path operated by the controller to provide power equalization to limit ingress noise in the upstream path (col.9, lines 33-col.10, line 17, col.11, line 39-col.12, line 9 and line 58-col.13, line 1+).

Claim 13 is met as previously discussed with respect to claim 7, note that the controller as claimed would be the headend controller of Williams that is modified by the downstream controller of Martin and the upstream controller of Martin.

Claim 14 is met as previously discussed with respect to claims 8 and 13.

Claim 15 is met as previously discussed with respect to claims 9 and 14.

Claim 16 is met as previously discussed with respect to claims 7, 10 and 13.

Claim 17 is met as previously discussed with respect to claims 7 and 8.

Claim 18 is met as previously discussed with respect to claim 12.

5. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over **U.S. Patent 5,815,794 (Williams)** in view of **U.S. Patent 5,020,129 (Martin et al.)** as applied to claim 15 above, and further in view of **U.S. Patent 6,678,893 (Jung)**.

As to claim 19, Williams as modified by Martin, fail to teach the cable system where the downstream path provided with an amplifier controlled by the cable modem to avoid excessive insertion loss.

However, **Jung** teaches the cable system wherein the downstream path is provided with an amplifier (Units 501,502,503 and 504 of upstream path in Figure 5) controlled by a cable modem (Figure 6) to avoid insertion loss.

Hence it would have been obvious to a person of ordinary skill in the art, to incorporate the teaching of Jung into the system of Williams as modified by Martin for the purpose of minimizing level changes of signals, therefore limiting signal loss to the end-user terminal.

### ***Response to Arguments***

6. Applicant's arguments with respect to claim 7-19 have been considered but are moot in view of the new ground(s) of rejection.

With respect to claims 7-19, Applicant amends the independent claims and argues that the prior arts of record Williams (5,815,794) in view of Martin et al (5,020,129) used in the last office action for claims 7 and 13 and other depend claims, do not teach the amended claim limitations. Furthermore the 103(a) rejection of other claims using Williams (5,815,794) in view of Martin et al (5,020,129) and further in view of Jung (6,678,893) is improper, citing MPEP with respect to obviousness (see page 6+ of applicant's Remarks).

In response, Examiner disagrees. Examiner, notes applicant's argues, however, William teaches a controller that dynamically adjust the gain level, transmission power level, etc., in real-time to control the upstream or return path gain and attenuation to compensate for ingress noise and any undesirable energy (col.7, lines 1-15, col.8, lines 26-55, col.9, line 33-51, col.10, line 1-52, col.11, line 39-col.12, line 9, line 60-col.13, line 16). William is silent a controller for selectively providing unimpeded, partially impeded, and full cut off of cable service in the downstream path. However, in the same



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field of endeavor, this deficiency is disclosed in **Martin**, which teaches a switching mechanism (Fig. 1) that is controlled by a controller (microcontroller 14 in Fig.1, Col.7, lines 66 - 67, Col.8, lines 1 - 2) for selectively providing unimpeded, partially impeded, and full cut off of cable service in the downstream path and further teaches that access to each logical channels can be provided or denied access based on authorized service codes (Co.4, lines 16-37), i.e., if access is provided to all the logical channels, unimpeded service is provided; if access is provided to some logical channels, partially impeded service is provided and if accesses to all logical channels are denied, full cut off cable service is provided. Furthermore, Examiner maintains, the test for obviousness is not whether the features of a secondary reference may be bodily incorporate into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. In this instant William, Martin and Jung are in the same field of endeavor, i.e., apparatus or receiver for providing CATV services to subscriber locations and managing the subscriber units accordingly. Hence, applicant's arguments/amendments do not overcome the prior arts of records. The 103(a) rejection of the above office action is proper, meets all the claim limitations as discussed above. The amendment to the independent claims necessitated the new grounds of rejection. **This office action is non-final.**

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Vandenabeele et al (6,694,516) disclose method used in a telecommunication network and a termination unit.

Curry et al (3,750,022) disclose system for minimizing upstream noise in a subscriber response cable TV system.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Annan Q. Shang** whose telephone number is **571-272-7355**. The examiner can normally be reached on **700am-400pm**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Christopher S. Kelley** can be reached on **571-272-7331**. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, **contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)**. If you would like assistance from a **USPTO Customer Service Representative** or access to the automated information system, call **800-786-9199 (IN USA OR CANADA) or 571-272-1000**.

A handwritten signature in black ink, appearing to read 'Annan Q. Shang', with a stylized flourish at the end.

**Annan Q. Shang.**